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EXAMINER
QIN, YIXING

ART UNIT	PAPER NUMBER
2622	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/893,342	KOTAKA, SATOSHI
	Examiner	**Art Unit**	
	Yixing Qin	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 June 2001</u>.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-9</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-9</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>25 February 2003</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claim Objections

Claim 5 is objected to because of the following informalities: in line 10 of claim 5,

the word "staring" should be "starting." Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Maramatsu et

al (U.S. Patent No. 5,539,445).

5.   Claim 5

A copying-operation control device connectable to at least one scanner and at

least one printer, the copying-operation control device comprising:

- **a copy job management information storing unit which includes a memory**

     capacity capable of storing plural pieces of copy job management

     information including scanner identifying information and printer

     identifying information;

- Maramatsu et al discloses in 6a and 6b and column 8, lines 38-50 the use of a code memory 306 and a management table MT1. These store the various information needed for printing.

- Maramatsu et al further discloses in column 6, lines 57-63 that the "...<u>panel 91 displays the various states of the copying apparatus 1...and the operation modes of the copying apparatus 1..., display other various information...</u>" One can see in Fig. 2 of Maramatsu et al that the display shows such information in item 91. Although this information is not stored in the management table, it would have been easy for one of ordinary skill to designate that this information to be stored along with the image data in the management table or the code memory. It would have been a matter of design of where one would want information to be stored.

- **a data storing unit which stores image data output from one of the at least one scanner;**

- Maramatsu et al discloses in column 6, lines 27-28 that "<u>[t]he image data read via the scan by the scanner 19 is stored in the image memory 304...</u>"

- **a start command accepting unit which accepts a start command for staring a copy job representing that which scanner being not in operation of the at least one scanner is designated as an image data source and which printer of the at least one printer is designated as a copy data destination;**

- The "**start-command accepting unit**" would at least be a part of the control portion 100 (such as CPU 101 of Maramatsu et al, which controls the display and input keys – column 7, lines 8-10).

- One knows that the scanner is used to obtain data from a document (as mentioned in the above limitation) and that the printer PRT in the Maramatsu et al reference is used to print the image data (column 7, lines 62-66).

- **a copy-job management information forming unit which executes such controls that when the start-command accepting unit accepts the start command for the copy job, the copy-job management information forming unit forms the copy-job management information including the scanner identifying information of the scanner designated as the image data source on the copy job and printer identifying information of the printer designated as the copy data destination on the copy job, and stores the copy-job management information into the copy job management information storing unit;**

- Maramatsu et al discloses in column 7, lines 17-22 and column 8, lines 52-56 that the CPU 106 can act as a "**management information forming unit.**" From column 7, lines 11-14, one would understand that the CPU 103 and CPU 104 control the scanning and printing processes. It would make sense that these two CPUs and their RAMs (column 7, line 5) would contain information about the scanner and the printer. Although the type of information is not disclosed, one skilled in the art would understand that one needs to store pertinent scanning

and printing information in order for the copying process to be completed

correctly.

- More broadly, all the various CPUs in the Maramatsu et al invention is in the

  control section and one could interpret the control section as a "unit" or a

  combination of a plurality of "units." The various CPUs have different tasks

  (column 7, lines 1-28), but one skilled in the art could manipulate the design to

  have certain CPUs perform certain tasks.

- **a reading-operation control unit which executes such controls that when**

  the copy-job management information is formed by the copy-job

  management information forming unit, the reading-operation control unit

  causes the scanner identified by scanner identifying information contained

  in the copy-job management information to start an operation of reading an

  image on an original document set on the scanner, and the reading-

  operation control unit associates the image data which the scanner outputs

  as the result of the reading operation with the copy-job management

  information and stores the image data into the data storing unit whether or

  not a printer identified by printer identifying information contained in the

  copy-job management information is in operation;

- CPU 103 controls the drive of the scanning unit 10 (column7, lines 11-12). CPU

  103 could read on the **"reading-operation control unit."**

- Maramatsu et al also discloses in column 6, lines 27-28 that "[t]he image data

  read via the scan by the scanner 19 is stored in the image memory 304..."

- Regarding the operation of the printer : the printer is always either operating or not operating.

- **a printing-operation control which supplies print data based on the image data, stored in the data storing unit in association with the copy-job management information earliest stored in the copy-job management information storing unit, to the printer identified by printer identifying information contained in the copy-job management information; and**

- Fig. 3a of Maramatsu et al shows outgoing information from the memory unit 30 to the print processor (item 10 of Fig. 3b). Column 14, lines 43-62 of Maramatsu et al describes the copying operation of their invention. In lines 54-62, especially, Maramatsu et al discloses that "[w]hile a third original is fed, the image data of the front side of the first original is read out [and printed]...[t]hen, the front side of the second original is read out from the image memory 304 [and printed].

- **a management deleting unit which deletes the copy-job management information earliest stored in the copy-job management information storing unit when the operation of the reading-operation control unit, which is started when the copy-job management information is formed, ends, and the sending of the print data based on the image data associated with the copy-job management information to the printer is completed.**

- Maramatsu et al discloses in column 8, lines 56-61 that "...when the image data are read out, said encoded data transmitted from the hard disk 310 are read from the code memory 306 via an opposite operation. The information contained in

the management table MT1 is erased when all the required page information has

been discharged normally." The CPU 106 is what controls this process (column

8, lines 52-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

II.   Claims 1, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable

over the applicant's disclosed prior art in the background.

1.   Claim 1

A copying machine comprising:

- **a reading unit which reads an image on an original document and outputs image data representing the image;**

- The applicant discloses in the admitted prior art of the specification on page 1, lines 22-24 that "[a] recent general copying machine is made up of a reading section for generating image data representative of an image on an original document..."

- **a printing unit which receives printing data and prints according to the printing data;**

- The applicant discloses in the admitted prior art of the specification on page 1, lines 24-25 that the recent general copying machine also contains "...<u>a printing section for printing a picture representative of the image data</u>..."

- **a data storing unit which stores the image data output from the reading unit;**

- The applicant discloses in the admitted prior art of the specification on page 3, lines 8-11 that "...the control section <u>obtains a predetermined amount of the image data from the reading section, and stores it as storage image data into an internal memory</u> (step S305)."

- **a start-command accepting unit which accepts a start command for starting a copy job when the reading unit is not in a reading operation;**

- The applicant discloses in the admitted prior art of the specification on page 2, lines 10-12 that "...<u>the control section</u> of the digital copying machine <u>executes a procedural process as shown in Fig. 18 when a copy start is instructed</u> (when a copy start button is depressed)."

- Although it is not explicitly stated in the prior art disclosure, the control section would at least contain necessary hardware or software to perform the functions of the **"start-command accepting unit."** This would have been obvious since the control section executes a process after knowing that the copy start button is pressed. The motivation for creating a creating a **"start-command accepting**

unit" would have been for modularization, which has added benefits when it

comes to maintenance and repair – only single units need to be

replaced/repaired instead of the entire control section.

- **a reading-operation control unit which executes such controls that when the start-command accepting unit accepts the start-command of the copy job, the reading-operation control unit causes the reading unit to start the reading operation of reading the image on the original document set to the reading unit and the reading-operation control unit stores the image data output from the reading unit into the data storing unit whether the printing unit is operating or not; and**

- The applicant discloses in the admitted prior art of the specification on page 2, lines 17-18 that "...the <u>control section instructs the reading section to read an image</u> on a first original document (step S300)." The control section contains the necessary hardware/software to act as a "**reading-operation control unit**" since it instructs the reading unit. The motivation for having this particular unit is the same as having a "**start-command accepting unit**" as mentioned above.

- Also, on page 3, lines 8-11, the specification states that "...the control section <u>obtains a predetermined amount of the image data from the reading section, and stores it as storage image data into an internal memory</u>."

- **a printing-operation control unit which supplies the printing data based on the image data stored in the data storing unit to the printing unit.**

- The applicant discloses in the admitted prior art of the specification on page 3, lines 16-18 that "...the control section supplies a predetermined amount of the storage image data (which was earliest stored) to the printing section..."

4.   Claim 4

A copying-operation control device connectable to a scanner and a printer, comprising:

- a data storing unit which stores image data output from the scanner;

- a start-command accepting unit which accepts a start command for starting a copy job when the scanner is not in a reading operation;

- a reading-operation control unit which executes such controls that when the start-command accepting unit accepts the start-command, the reading-operation control unit causes the scanner to start the reading operation of reading an image on an original document set to the scanner whether the printer is operating or not, and the reading-operation control unit stores the image data output from the scanner into the data storing unit; and

- a printing-operation control unit which supplies a print data element based on at least one of the image data stored in the data storing unit to the printer.

- The limitations in this claim have been addressed in the rejection to claim 1. The reading section disclosed by the applicant can read on a scanner. Although it is not explicitly stated in the prior art disclosure that the there are connectable

printer and scanner, the connection of these two items to a copying device is well-known. The motivation would have been so that documents can be read and printed – two essential elements of the copying process.

6.   **Claim 6**

A computer program product including instructions, wherein the instructions, when executed by a computer connected to a scanner and a printer, cause the computer to perform the steps of:

- **storing image data output from said scanner;**

- **accepting a start command for starting a copy job when the scanner is not in scanning operation;**

- **causing the scanner to start a reading operation of reading an image on an original document set to the scanner as the image data, and storing the image data output from the scanner into the computer whether the printer is operating or not when the start command for the copy job is accepted; and**

- **supplying print data based on the at least one image data stored in the computer to the printer.**

- These limitations have been discussed in the rejection to claims 1 and 4. The only difference is that this is a program with instructions. However, one skilled in the art would understand that one can make controls using either hardware (i.e. circuitry) or software (i.e. HDL) and the advantages of both. The motivation for

using software would have been for easier upgrading or patching of the software
to fix bugs.

III.   Claims 3, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable
over applicant's disclosure of prior art in the specification in view of Maramatsu et al
(U.S. Patent No. 5,539,445).

The Maramatsu reference discloses an image reading apparatus capable of reading a
plurality of originals in a single reading operation.

3.   **Claim 3**

A copying machine according to claim 1 further comprising:

- **a display; and**

- The applicant's disclosure of the prior art does not mention any forms of displays.
  Maramatsu et al reference, however, discloses a display in Fig. 2.

- **a display control unit which executes such controls that the display control**
  unit causes the display to display a state of the process executed by the
  reading unit and a state of the process executed by the printing unit during
  the operation of the reading-operation control unit and the printing-
  operation control unit, and the display control unit causes the display to
  display a state that the start-command accepting unit can accept the start

command of the copy job and the state of the process executed by the

printing unit when the reading-operation control unit is not in operation and

the printing-operation control unit is in operation.

- Maramatsu et al further discloses in column 6, lines 57-63 that the "...panel 91 displays the various states of the copying apparatus 1...and the operation modes of the copying apparatus 1..., display other various information..." It would have been obvious to one of ordinary skill in the art to only display the pertinent information (i.e. no need to display copying information if a printer is printing.)

- Both reference are in the art of image processing and image reading/printing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a display. The motivation for the display of such information is to enable users to know the progress in which the copier/printer is making. Furthermore, the use of a display to show various information on a copier is well-known.

7.   Claim 7

A copying machine comprising:

- **a reading unit which reads an image on an original document;**

- **a printing unit which prints on a printing sheet;**

- The reading and printing units have been discussed in the rejections above and is disclosed in the applicant's disclosure of the prior art.

- **a copying condition accepting unit which accepts a designation of copying condition;**

- Although the applicant's disclosure discloses a copy start command, as addressed in the rejection to claim 1, it does not go into detail about copying conditions. However, the secondary reference, Maramatsu et al, discloses in Fig. 2 (item 91) various **"copying conditions"** such as magnification, paper type, etc. In Fig. 3 and column 7, lines 8-10, Maramatsu et al, discloses that "[t]he CPU 101 executes controls related to the displays and the input of signals from the various operation keys of the operation panel OP."

- **a copying-execution command accepting unit which accepts a copying start command;**

- As mentioned in the rejection to claim 1, a copy start command is processed by a control section. This control section reads on this command accepting unit.

- **a copy-job management data forming unit which forms copy-job management data based the copying condition accepted by the copying condition accepting unit when the copying-execution command accepting unit accepts the copy start command;**

- Maramatsu et al discloses in column 8, lines 38-50 a code memory 306 and a management table MT1. Fig. 6a and lines 44-51 of the same column discloses the various information that could be contained in the MT1. Line 51 of the same column discloses that the CPU 106 generates all the information in the MT1. This CPU 106 would read on the **"data forming unit."**

- **a managing unit which manages the copy-job management data formed by the copy-job management data forming unit; and**

- Maramatsu et al discloses in Fig. 3a (item 30) a memory unit with a CPU106. Column 8, lines 52-56 discloses that the CPU106 uses information from the MT1 to generate controls, store data, etc. (i.e. **"manage"**). The code memory could read on this as well (column 8, lines 38-39).

- **a copy-job executing unit which refers to the copy-job management data received from the managing unit, and causes the reading unit to perform an image reading operation and causes the printing unit to perform a printing operation,**

- Maramatsu et al discloses in column 7, lines 17-22 that "[t]he CPU 106 temporarily stores the read image data into memory...via the control of the memory unit section 30, the stored image data are read, and output to the print processing section 40. Thus, the image reading device IR and the printing device PRT are independently controlled as to improve the copying speed."

- **wherein the copy-job management data forming unit forms copy-job management data whether or not the printing unit is in operation.**

- As discussed above, the code memory and MT1 contain copy-job management data. The printing unit is always in or not in operation.

- The motivation for improving copiers with the management and copying condition/executing units is to enable easier management of image and printing information.

8.   Claim 8

A copying machine according to claim 7, wherein

- **the copy-job management data forming unit forms the copy-job management data including information of the reading operation and information of the printing operation;**

- as mentioned above in the rejection to claim 3, Maramatsu et al discloses in column 6, lines 57-63 that the "...panel 91 <u>displays</u> the various states of the copying apparatus 1...and the operation modes of the copying apparatus 1, such as <u>exposure level, magnification, copy paper, autoscan mode and the like, display other various information...</u>"

- Although CPU 106, as mentioned in the rejection to claim 7 above, performs the generation of data in the code memory and the MT1, Maramatsu et al also discloses in column 7, lines 1-30 that there is a central control portion which contain CPUs 101-108.

- One lines 2-6, Maramatsu et al discloses that each of the CPUs has a ROM containing CPU-specific programs and memory work areas. It would seem that CPUs 103 and 104 (lines 11-14) would have been more suited to contain information about the reading and the printing operation.

- It would have been obvious to one of ordinary skill in the art at the time of the invention to use another CPU (such as CPU 106) or combine the tasks of certain CPUs (such as combining the tasks of CPU 103, 104 and 106) into one CPU.

More broadly, one can also use the control section to read on the **"data forming unit"** since it contains all the necessary CPUs to perform the claimed limitations.

- **the managing unit is capable of managing a plurality of copy-job management data, and transfers another copy-job management data to the copy-job executing unit at a time point that a reading operation of a copy job being currently executed ends;**

- As seen in Fig. 6b of Maramatsu et al, the code memory contains various data of pages. Again, CPU 106 or the code memory would read on the **"managing unit."**

- Maramatsu discloses in Fig. 13 and column 14, lines 43-67 and column 14, line1-3 a description of the copy operation's timing chart of their invention. In lines 54-63, especially, Maramatsu et al discloses that as a third incoming job is needed to be read, the first two originals that are currently stored in the image memory 304 are printed.

- Column 8, lines 17-20 of Maramatsu et al discloses that the image data is written into image memory and then into the code memory. The CPU 106 would manage the data in the code memory and MT1.

- **the copy-job executing units refers to the information of the reading operation and the information of the printing operation which are contained in the copy-job management data received from the managing unit, and concurrently operates the reading unit and the printing unit.**

- Maramatsu et al discloses in Fig. 8 and column 12, lines 10-12, that "...in the direct mode, image data read via the image reader IR are simultaneously printed by the printer PRT." One would understand that the information contained in MT1 and the code memory is needed for proper reading and printing.

III.   Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's disclosure of prior art in the specification, and in view of Maramatsu et al (U.S. Patent No. 5,539,445) and further in view of Imada (U.S. Patent No. 5,880,851)

The Imada reference discloses an image processing apparatus capable of interrupting the scanning/copying process.

2.   Claim 2

A copying machine according to claim 1 further comprising:

- **a managing unit which assigns copy job identifying information to each copy job of which a start command is obtained by the start-command accepting unit, and manages the correspondence between the image data stored in the data storing unit by the reading-operation control unit and the copy job identified by any of the copy job identifying information;**

- The applicant's disclosure of the prior art does not disclose any means of copy job management. However, the secondary reference, Maramatsu et al, discloses

in Fig. 6a and 6b, and column 8, lines 38-39 that "[t]he code memory 306

manages the aforesaid processing via a management table MT1 stored in the

RAM 126." Lines 44-50 discloses the various information that the MT1 stores.

The code memory would read on the **"managing unit"** as claimed.

- **a halting-command accepting unit which accepts a halt command for**

  halting the copy job; and

- The applicant's prior art does not discuss the stopping/halting/clearing of copying

  and the Maramatsu et al reference only briefly mentions that the control panel in

  their invention has a "...stop key 95, for interrupting a copy operation..." (column

  6, lines 53-54). However, it does not go into detail about what happens when

  this stop key is depressed.

- The tertiary reference, Imada, discloses in Fig. 7 an input break key (ST704) and

  a copy break key (ST709). Column 7, lines 36-42 explains how a "main control

  circuit 2 controls so as to stop the operation of the automatic document feeder..."

  when the input break key is depressed. The main control circuit would read on

  the **"halting-command accepting unit..."**

- **a copy-job halting control unit which executes such controls that the copy-**

  job halting control unit deletes from the data storing unit the image data

  which is managed by the managing unit and corresponds to the copy job

  identifying information of the copy job of which the halt command is

  accepted by the halting-command accepting unit, when the reading-

  operation control unit carries out a process on the copy job, the copy-job

halting control unit causes the reading-operation control unit to halt the execution of the process, and when the printing-operation control unit executes a process on the copy job, the copy-job halting control unit causes the printing-operation control unit to halt the execution of the process.

- From above, the Imada reference discloses in Fig. 7 and column 7, lines 36-64 the processing that takes place when an input or copy break key is depressed. One can see that image information is deleted from the memory and the copy or the printing process is not executed or interrupted.

- All three references are in the art of image processing and the reading and printing of documents. This will serve as the motivation for combining the references mentioned above. Therefore, it would have been obvious to one of ordinary skill in the art to have a managing and halting controls be included in a copier. The motivation would have been to enable easier management of image and printing information as well as to let users be able to cancel certain unwanted copying or printing jobs.

9.   **Claim 9**

A copying machine according to claim 7, wherein

- **the copying machine includes a job cancel accepting unit which accepts the designation of the copy job to be canceled, and**

- Maramatsu et al discloses in column 6, lines 54-55, a "...stop key 95 for

  interrupting a copy operation..." Column 7, lines 8-10 discloses that "...CPU 101

  executes controls related to the displays and the input of signals from the various

  operation keys of the control panel OP."

- **the managing unit manages the copy-job management data in the order of**

  forming the copy-job management data, causes the copy-job executing unit

  to execute the copy-job management data in the data forming order, and

  abandons the copy-job management data on the copy job when the job

  cancel accepting unit accepts the designation of the copy job to be

  canceled.

- As mentioned above in the rejection to claim 8, the image data (and its

  associated management data) is printed sequentially. However, the Maramatsu

  et al reference does not go into detail about what happens to the data when a

  stop key is depressed. The secondary reference, Imada, discloses in Fig. 7 and

  column 7, lines 36-64 the processing that takes place when an input or copy

  break key is depressed. One can see that image information is deleted from the

  memory and the copy or the printing process is not executed or interrupted.

- The motivation would have been to free up memory space when a copy job's

  data is no longer needed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is 703-306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached on 703-305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YQ